(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 17 February 2005 (17.02.2005)

PCT

(10) International Publication Number WO 2005/014665 A1

- (51) International Patent Classification⁷: C08F 4/64, C07F 9/535, 9/00, 7/00, 7/28, 7/30, 19/00
- (21) International Application Number:

PCT/EP2004/008714

- (22) International Filing Date: 3 August 2004 (03.08.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03077434.3

4 August 2003 (04.08.2003) EP

- (71) Applicant (for all designated States except US): DSM IP ASSETS B.V. [NL/NL]; Het Overloon 1, NL-6411 Te Heerlen (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LJPEIJ, Edwin, Gerard [NL/NL]; Vrangendael 153, NL-6136 JN Sittard (NL). ARTS, Henricus, Johannes [NL/NL]; Montjoiestraat 4, NL-6151 JD Munstergeleen (NL). VAN DORE-MAELE, Gerardus, Henricus, Josephus [NL/NL]; Op de Hoef 6, NL-6132 HN Sittard (NL). BELJER, Fellx, Hugo [NL/NL]; Darwinstraat 14, NL-6132 GW Sittard (NL).

- (74) Agent: MOOIJ, Johannes, Jacobus; DSM Intellectual Property, P.O. Box 9, NL-6160 MA Geleen (NL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR THE PREPARATION OF A METALLOORGANIC COMPOUND COMPRISING AT LEAST ONE IMINE LIGAND

(57) Abstract: The invention relates to a process for the preparation of a metalorganic compound, comprising at least one imine ligand, characterized in that an imine ligand according to formula 1, or the HA adduct thereof, wherein HA represents an acid, of which H represents its proton and A its conjugate base, is contacted with a metal-organic reagent of formula 2 in the presence of at least 1, respectively 2 equivalents of an inorganic or metal-organic base, wherein Y=N-R (formula 1), Y is selected from a substituted carbon, nitrogen or phosphorous atom, R represents a proton, a protic or an aprotic substituent, and the metal organic compound is: $M^{*}(L_1)_k(L_2)_n(L_3)_m(L_4)_nX$ (formula 2) wherein: M represents a group 4 or group 5 metal ion, V represents the valency of the metal ion, being 3, 4 or 5, L₁, L₂, L₃, and L₄ represent ligands on M and may be equal or different, X represents a group 17 halogen atom, and k, 1, m, n = 0, 1, 2, 3, 4 with k+l+m+n+l =V. The invention further relates to a process for the preparation of a polyolefin by making a metal-organic compound according to the process of the invention, wherein the base is an olefin polymerisation compatible base, which metal-organic compound is activated anywhere in, or before a polymerisation reactor.

